

## SEQUENCE LISTING

DT09 Rec'd PCT/PTO 23 JUN 2004

&lt;110&gt; Daiichi Sntory Farma Co.,Ltd.

&lt;110&gt; Kenji KANGAWA

&lt;120&gt; A method for producing a modified peptide

&lt;130&gt; D05F1044

&lt;150&gt; JP 2002-109761

&lt;151&gt; 2002-04-11

&lt;160&gt; 39

&lt;210&gt; 1

&lt;211&gt; 28

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

<223> Amino acid sequence for human endogenous peptides of growth hormone  
secretagogue

&lt;400&gt; 1

Gly Ser Ser Phe Leu Ser Pro Glu His Gln Arg Val Gln Gln Arg Lys

1

5

10

15

Glu Ser Lys Lys Pro Pro Ala Lys Leu Gln Pro Arg

20

25

&lt;210&gt; 2

&lt;211&gt; 27

&lt;212&gt; PRT

2/16

&lt;213&gt; Homo sapiens

&lt;223&gt; Amino acid sequence for human endogenous peptides (27 amino acids) of growth hormone secretagogue

&lt;400&gt; 2

Gly Ser Ser Phe Leu Ser Pro Glu His Gln Arg Val Gln Arg Lys Glu

1 5 10 15

Ser Lys Lys Pro Pro Ala Lys Leu Gln Pro Arg

20 25

&lt;210&gt; 3

&lt;211&gt; 28

&lt;212&gt; PRT

&lt;213&gt; Rattus norvegicus

&lt;223&gt; Amino acid sequence for rat endogenous peptides of growth hormone secretagogue

&lt;400&gt; 3

Gly Ser Ser Phe Leu Ser Pro Glu His Gln Lys Ala Gln Gln Arg Lys

1 5 10 15

Glu Ser Lys Lys Pro Pro Ala Lys Leu Gln Pro Arg

20 25

&lt;210&gt; 4

&lt;211&gt; 27

&lt;212&gt; PRT

&lt;213&gt; Rattus norvegicus

&lt;223&gt; Amino acid sequence for rat endogenous peptides (27 amino acids) of growth hormone secretagogue

&lt;400&gt; 4

Gly Ser Ser Phe Leu Ser Pro Glu His Gln Lys Ala Gln Arg Lys Glu

3/16

1                      5                      10                      15  
Ser Lys Lys Pro Pro Ala Lys Leu Gln Pro Arg  
                         20                      25

&lt;210&gt; 5

&lt;211&gt; 28

&lt;212&gt; PRT

&lt;213&gt; Mus musculus

<223> Amino acid sequence for mouse endogenous peptides of growth hormone  
secretagogue

&lt;400&gt; 5

Gly Ser Ser Phe Leu Ser Pro Glu His Gln Lys Ala Gln Gln Arg Lys  
1                      5                      10                      15  
Glu Ser Lys Lys Pro Pro Ala Lys Leu Gln Pro Arg  
                         20                      25

&lt;210&gt; 6

&lt;211&gt; 28

&lt;212&gt; PRT

&lt;213&gt; Sus scrofa (pig)

<223> Amino acid sequence for porcine endogenous peptides of growth hormone  
secretagogue

&lt;400&gt; 6

Gly Ser Ser Phe Leu Ser Pro Glu His Gln Lys Val Gln Gln Arg Lys  
1                      5                      10                      15  
Glu Ser Lys Lys Pro Ala Ala Lys Leu Lys Pro Arg  
                         20                      25

&lt;210&gt; 7

<211> 27

<212> PRT

<213> Bos taurus

<223> Amino acid sequence for bovine endogenous peptides (27 amino acids)  
of growth hormone secretagogue

<400> 7

Gly Ser Ser Phe Leu Ser Pro Glu His Gln Lys Leu Gln Arg Lys Glu

1 5 10 15

Ala Lys Lys Pro Ser Gly Arg Leu Lys Pro Arg

20 25

<210> 8

<211> 27

<212> PRT

<213> Ovis aries

<223> Amino acid sequence for ovine endogenous peptides (27 amino acids)  
of growth hormone secretagogue

<400> 8

Gly Ser Ser Phe Leu Ser Pro Glu His Gln Lys Leu Gln Arg Lys Glu

1 5 10 15

Pro Lys Lys Pro Ser Gly Arg Leu Lys Pro Arg

20 25

<210> 9

<211> 28

<212> PRT

<213> Canis familiaris

<223> Amino acid sequence for dog endogenous peptides of growth hormone  
secretagogue

5/16

&lt;400&gt; 9

Gly Ser Ser Phe Leu Ser Pro Glu His Gln Lys Leu Gln Gln Arg Lys

1

5

10

15

Glu Ser Lys Lys Pro Pro Ala Lys Leu Gln Pro Arg

20

25

&lt;210&gt; 10

&lt;211&gt; 21

&lt;212&gt; PRT

<213> *Anguilla japonica*

&lt;220&gt;

&lt;221&gt; AMIDATION

&lt;222&gt; 21

<223> Amino acid sequence for eel endogenous peptides of growth hormone  
secretagogue

&lt;400&gt; 10

Gly Ser Ser Phe Leu Ser Pro Ser Gln Arg Pro Gln Gly Lys Asp Lys

1

5

10

15

Lys Pro Pro Arg Val

20

&lt;210&gt; 11

&lt;211&gt; 23

&lt;212&gt; PRT

<213> *Oncorhynchus mykiss*

&lt;220&gt;

&lt;221&gt; AMIDATION

&lt;222&gt; 23

&lt;223&gt; Amino acid sequence for rainbow trout endogenous peptides (23 amino

6/16

acids) of growth hormone secretagogue

<400> 11

Gly Ser Ser Phe Leu Ser Pro Ser Gln Lys Pro Gln Val Arg Gln Gly

1

5

10

15

Lys Gly Lys Pro Pro Arg Val

20

<210> 12

<211> 20

<212> PRT

<213> Oncorhynchus mykiss

<220>

<221> AMIDATION

<222> 20

<223> Amino acid sequence for rainbow trout endogenous peptides (20 amino acids) of growth hormone secretagogue

<400> 12

Gly Ser Ser Phe Leu Ser Pro Ser Gln Lys Pro Gln Gly Lys Gly Lys

1

5

10

15

Pro Pro Arg Val

20

<210> 13

<211> 24

<212> PRT

<213> Gallus domesticus

<223> Amino acid sequence for chicken endogenous peptides of growth hormone secretagogue

<400> 13

7/16

Gly Ser Ser Phe Leu Ser Pro Thr Tyr Lys Asn Ile Gln Gln Gln Lys

1

5

10

15

Gly Thr Arg Lys Pro Thr Ala Arg

20

&lt;210&gt; 14

&lt;211&gt; 24

&lt;212&gt; PRT

&lt;213&gt; Gallus domesticus

<223> Amino acid sequence for chicken endogenous peptides of growth hormone  
secretagogue

&lt;400&gt; 14

Gly Ser Ser Phe Leu Ser Pro Thr Tyr Lys Asn Ile Gln Gln Gln Lys

1

5

10

15

Asp Thr Arg Lys Pro Thr Ala Arg

20

&lt;210&gt; 15

&lt;211&gt; 26

&lt;212&gt; PRT

&lt;213&gt; Gallus domesticus

<223> Amino acid sequence for chicken endogenous peptides of growth hormone  
secretagogue

&lt;400&gt; 15

Gly Ser Ser Phe Leu Ser Pro Thr Tyr Lys Asn Ile Gln Gln Gln Lys

1

5

10

15

Asp Thr Arg Lys Pro Thr Ala Arg Leu His

20

25

8/16

&lt;210&gt; 16

&lt;211&gt; 27

&lt;212&gt; PRT

<213> *Rana cafesbeiana*

&lt;223&gt; Amino acid sequence for frog endogenous peptides of growth hormone secretagogue

&lt;400&gt; 16

Gly Leu Thr Phe Leu Ser Pro Ala Asp Met Gln Lys Ile Ala Glu Arg

1

5

10

15

Gln Ser Gln Asn Lys Leu Arg His Gly Asn Met

20

25

&lt;210&gt; 17

&lt;211&gt; 28

&lt;212&gt; PRT

<213> *Rana cafesbeiana*

&lt;223&gt; Amino acid sequence for frog endogenous peptides of growth hormone secretagogue

&lt;400&gt; 17

Gly Leu Thr Phe Leu Ser Pro Ala Asp Met Gln Lys Ile Ala Glu Arg

1

5

10

15

Gln Ser Gln Asn Lys Leu Arg His Gly Asn Met Asn

20

25

&lt;210&gt; 18

&lt;211&gt; 20

&lt;212&gt; PRT

<213> *Tilapia nilotica*

&lt;220&gt;



9/16

&lt;221&gt; AMIDATION

&lt;222&gt; 20

<223> Amino acid sequence for tilapia endogenous peptides of growth hormone  
secretagogue

&lt;400&gt; 18

Gly Ser Ser Phe Leu Ser Pro Ser Gln Lys Pro Gln Asn Lys Val Lys

1

5

10

15

Ser Ser Arg Ile

20

&lt;210&gt; 19

&lt;211&gt; 22

&lt;212&gt; PRT

&lt;213&gt; Silurus asotus

&lt;220&gt;

&lt;221&gt; AMIDATION

&lt;222&gt; 22

<223> Amino acid sequence for catfish endogenous peptides of growth hormone  
secretagogue

&lt;400&gt; 19

Gly Ser Ser Phe Leu Ser Pro Thr Gln Lys Pro Gln Asn Arg Gly Asp

1

5

10

15

Arg Lys Pro Pro Arg Val

20

&lt;210&gt; 20

&lt;211&gt; 23

&lt;212&gt; PRT

&lt;213&gt; Silurus asotus

10/16

<223> Amino acid sequence for catfish endogenous peptides of growth hormone secretagogue

<400> 20

Gly Ser Ser Phe Leu Ser Pro Thr Gln Lys Pro Gln Asn Arg Gly Asp

1 5 10 15

Arg Lys Pro Pro Arg Val Gly

20

<210> 21

<211> 28

<212> PRT

<213> Equus caballus

<223> Amino acid sequence for equine endogenous peptides of growth hormone secretagogue

<400> 21

Gly Ser Ser Phe Leu Ser Pro Glu His His Lys Val Gln His Arg Lys

1 5 10 15

Glu Ser Lys Lys Pro Pro Ala Lys Leu Lys Pro Arg

20 25

<210> 22

<211> 4

<212> PRT

<213> Artificial sequence

<220>

<223> Amino acid sequence adjacent to a site cleaved by enterokinase

<400> 22

Asp Asp Asp Lys

1

11/16

&lt;210&gt; 23

&lt;211&gt; 4

&lt;212&gt; PRT

&lt;213&gt; Artificial sequence

&lt;220&gt;

<223> Amino acid sequence adjacent to a site cleaved by blood coagulation  
Factor Xa

&lt;400&gt; 23

Ile Glu Gly Arg

1

&lt;210&gt; 24

&lt;211&gt; 7

&lt;212&gt; PRT

&lt;213&gt; Artificial sequence

&lt;220&gt;

&lt;223&gt; Amino acid sequence containing a site cleaved by renin

&lt;400&gt; 24

Pro Phe His Leu Leu Val Tyr

1

5

&lt;210&gt; 25

&lt;211&gt; 6

&lt;212&gt; PRT

&lt;213&gt; Artificial sequence

&lt;220&gt;

&lt;223&gt;

&lt;400&gt; 25

12/16

Val Asp Asp Asp Asp Lys

1

5

&lt;210&gt; 26

&lt;211&gt; 36

&lt;212&gt; PRT

&lt;213&gt; Artificial sequence

&lt;220&gt;

&lt;223&gt; linker sequence in the fusion protein p117 8-28oPR

&lt;400&gt; 26

Glu Pro His His His His Pro Gly Gly Arg Gln Met His Gly Tyr Asp

1

5

10

15

Ala Asp Val Arg Leu Tyr Arg Arg His His Gly Ser Gly Ser Pro Ser

20

25

30

Arg His Pro Arg

35

&lt;210&gt; 27

&lt;211&gt; 36

&lt;212&gt; PRT

&lt;213&gt; Artificial sequence

&lt;220&gt;

&lt;223&gt; linker sequence in the fusion protein p117 8-28oRR

&lt;400&gt; 27

Glu Pro His His His His Pro Gly Gly Arg Gln Met His Gly Tyr Asp

1

5

10

15

Ala Asp Val Arg Leu Tyr Arg Arg His His Gly Ser Gly Ser Pro Ser

20

25

30

Arg His Arg Arg

35

&lt;210&gt; 28

&lt;211&gt; 36

&lt;212&gt; DNA

&lt;213&gt; Artificial sequence

&lt;220&gt;

&lt;223&gt; primer ORI-RR

&lt;400&gt; 28

ggttccggat ccccttctcg acatcgccgg gaacac

36

&lt;210&gt; 29

&lt;211&gt; 25

&lt;212&gt; DNA

&lt;213&gt; Artificial sequence

&lt;220&gt;

&lt;223&gt; primer SAL\*R

&lt;400&gt; 29

ataagtcgac ttatcgtggc tgcag

25

&lt;210&gt; 30

&lt;211&gt; 13

&lt;212&gt; PRT

&lt;213&gt; Artificial sequence

&lt;220&gt;

&lt;223&gt;

&lt;400&gt; 30

Arg His His Gly Ser Gly Ser Pro Ser Arg His Arg Arg

1

5

10

<210> 31

<211> 13

<212> PRT

<213> Artificial sequence

<220>

<223>

<400> 31

Arg His His Gly Ser Gly Ser Pro Ser Arg His Pro Arg

1

5

10

<210> 32

<211> 13

<212> PRT

<213> Artificial sequence

<220>

<223>

<400> 32

Arg His His Gly Ser Gly Ser Pro Ser Arg His Lys Arg

1

5

10

<210> 33

<211> 7

<212> PRT

<213> Artificial sequence

<220>

<223>

<400> 33

Gly Ser Ser Phe Leu Ser Pro

1

5

&lt;210&gt; 34

&lt;211&gt; 4

&lt;212&gt; PRT

&lt;213&gt; Artificial sequence

&lt;220&gt;

&lt;223&gt;

&lt;400&gt; 34

Phe Leu Ser Pro

1

&lt;210&gt; 35

&lt;211&gt; 14

&lt;212&gt; PRT

&lt;213&gt; Artificial sequence

&lt;220&gt;

&lt;223&gt; linker sequence

&lt;400&gt; 35

Arg Arg His His Gly Ser Gly Ser Pro Ser Arg His Pro Arg

1

5

10

&lt;210&gt; 36

&lt;211&gt; 27

&lt;212&gt; DNA

&lt;213&gt; Artificial sequence

&lt;220&gt;

&lt;223&gt; h8-28f1

&lt;400&gt; 36

tccccgcggg aacaccagcg cgtccag

27

<210> 37

<211> 33

<212> DNA

<213> Artificial sequence

<220>

<223> h8-28r1

<400> 37

acgctgctgg acgcgctggt gttccccgcgg gga

33

<210> 38

<211> 49

<212> DNA

<213> Artificial sequence

<220>

<223> GR2f

<400> 38

cagcgtaagg aatccaagaa gccaccagct aaactgcagc cacgatgag

49

<210> 39

<211> 44

<212> DNA

<213> Artificial sequence

<220>

<223> GR2r

<400> 39

tcgactcatt gtggctgcag tttagctggc ttcttggatt cctt

44